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MASSACHUSETTS WATERSHED INITIATIVE

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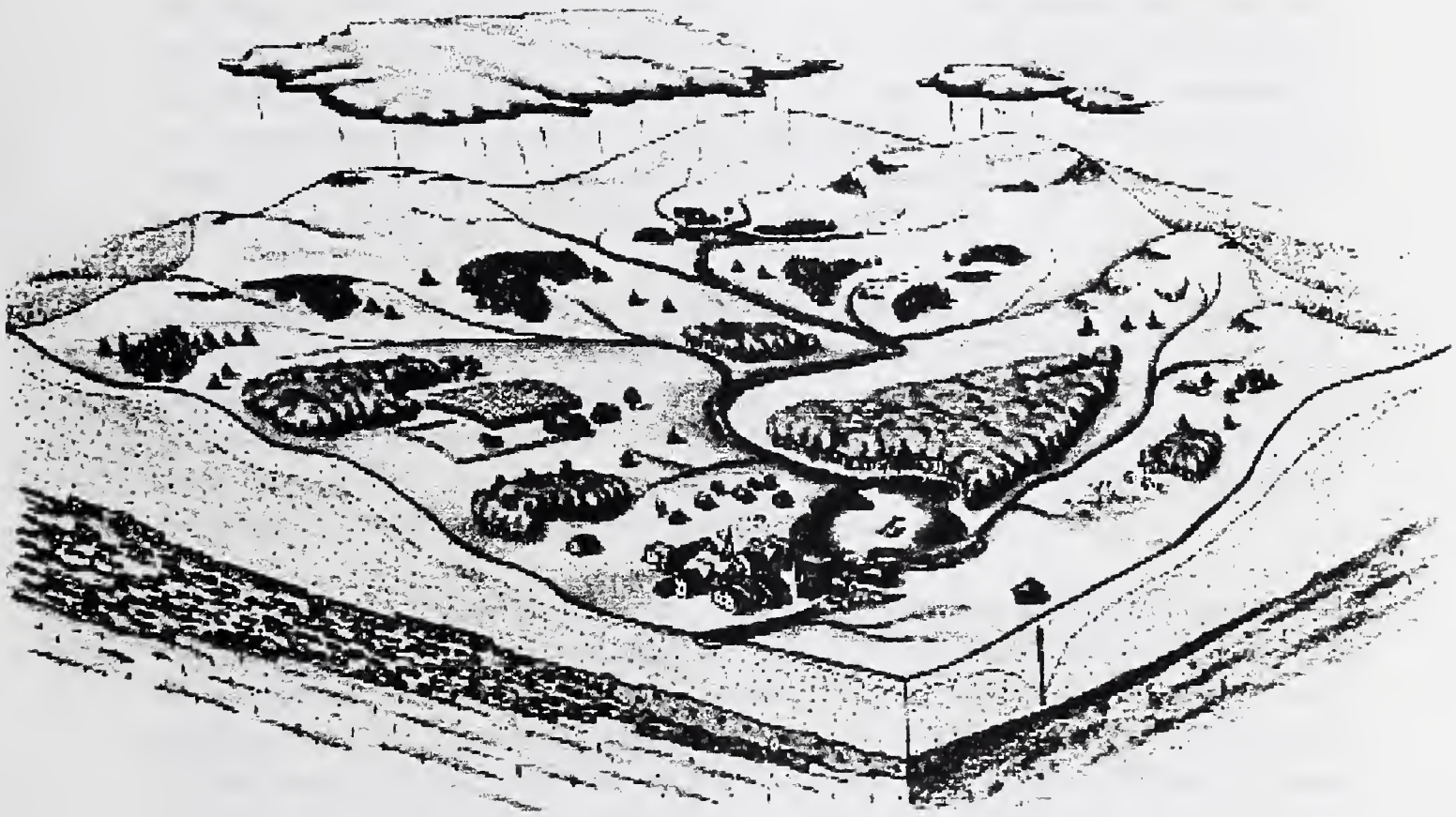
1999 Program Guide

A Watershed is the area of land that water flows across or under on its way to a stream, river, or lake.



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Massachusetts Watershed Initiative: Background

This program guide highlights how the Massachusetts Watershed Initiative is achieving success in 1999. The first section of this guide describes projects that are underway to begin to solve problems by working with community partners and federal, state, regional, and local agencies. Section II lists the priority issues in each watershed, which were identified by the watershed teams. The last section includes the goals we wish to accomplish in the upcoming year, and ways you can help us to achieve them. A statewide watershed map is included for reference purposes.

The Massachusetts Watershed Initiative is a partnership of local communities with state and federal environmental agencies, formed to more effectively solve today's environmental problems. This approach makes sense because the challenges we face today are different than those of just a decade ago. Pollution from industry and wastewater, once the greatest threat to our rivers, has largely been brought under control by tough environmental laws and regulations. Today, we face problems associated with sprawling development and increased per capita use of land and water resources. Many communities are unprepared for such rapid growth resulting in the overuse of our limited water supplies and pollution from widely dispersed sources like storm water runoff from paved area and failed septic systems.

The Initiative brings together government, business, and citizen partners to prevent and repair environmental pollution in our own backyards and neighborhoods. Each of Massachusetts' 27 watersheds has a Team that includes representatives from local, state, and federal groups, led by a full-time team leader. By sharing resources, these teams find efficient regional solutions to problems facing their communities.

The Watershed Teams focus on an innovative five year management process that is designed to collect and share resources and information, assess impacts to natural resources, and develop and implement activities to protect and improve the Commonwealth's natural resources. Each year builds on the work of the previous year. Annual Work Plans are developed with active team involvement and serve as a guide for coordinating team efforts. Plans are the building blocks of the more comprehensive Five Year Watershed Action Plan. Action Plans influence state and federal grants and loans, regulatory decision-making, and education/technical assistance programs to solve the most important environmental problems affecting communities.

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Section I: Massachusetts Watershed Initiative at Work

The following examples illustrate how the Initiative coordinates state agency, town, and watershed association planning efforts and focuses them on top priority areas within each watershed. The Watershed Team partners with local organizations and citizens and sets concrete and achievable Environmental Targets for each watershed. State revolving funds and grants, federal and private resources, and existing state and local resources are focused on achieving desirable environmental outcomes.

Watershed Teams are involved in developing innovative projects to solve complex problems so that new solutions can be shared across the state.

- The Ipswich River Watershed Team is designing water management strategies to solve the low flow problem that has made the Ipswich River one of the most threatened rivers in the nation. The team is working to determine the levels of flow needed to sustain aquatic life and will be a model for many rivers in the state.

- The French/Quinebaug Rivers Watershed Team and the DEM Office of Dam Safety are evaluating all the dams in their watershed to determine their hazard rating and identify those most in need of repair. They are also analyzing other issues associated with these dams including flooding, wetlands, fish habitats, hazardous sediment deposits, private/public wells, and beaches. This study will help to create a model that can be used to reduce impacts from other dams across Massachusetts.

- The Hoosic River Watershed Team, in partnership with the Regional Planning Agency, is implementing a watershed-wide education program to teach municipal officials about polluted runoff and how to avoid future problems. The program will help communities develop local by-laws, which can be shared with cities and towns in other watersheds.

- The Westfield, Farmington and Housatonic Rivers Teams, working with the Regional Planning Agency, have created a regional lakes and ponds organization to pool the resources of

local lakes associations so that the best techniques for protecting and restoring lakes are understood and available.

The Initiative helps <u>Community Partners</u> to protect and restore local land and water resources through Capacity Building and Communities Connected by Water Grants. For example:

- In the Shawsheen River watershed, a grass roots organization received an Initiative Service Contract to create a watershed association. They have created a strong organization that brings communities together to improve conditions in the watershed. The Association has monitored water quality, mapped storm drains, located pollution "hot spots", organized river clean-ups and helped towns complete open space plans.

- Local Sudbury-Assabet-Concord Rivers organizations received an Initiative Service Contract to form the SuAsCo Watershed Community Council. This Council provides a forum for community partners to coordinate their efforts and solve problems affecting cities and towns in eastern Massachusetts. Stream teams have been formed across the watershed and workshops have been held for municipal officials on pollution reduction.

The Initiative helps <u>towns</u> protect their water resources through water supply and open space planning, and providing overall technical assistance. For example:

- The Middlesex Conservation District and the Organization for the Assabet River, in cooperation with the SuAsCo Watershed Team and SuAsCo Community Council, are sponsoring a series of workshops for municipalities and businesses on controlling costly phosphorus pollution to the Assabet River.

- The Blackstone River Watershed Team is working with the towns of Upton, Hopedale, Mendon, Blackstone, and Bellingham, which make up the Mill River sub-watershed basin, on a pilot project to develop connected greenways. The project will analyze assessor parcel information with habitat

value, build-out and growth information to allow towns to make tough decisions regarding zoning, water supply, and open space protection.

- The Taunton River, French/Quinebaug Rivers, and Cape Cod Watershed Teams are partnering with the Cape Cod Commission, University of Massachusetts, and local communities to identify and map sensitive watershed and habitat resources using computer mapping techniques so that resources can be directed to the most critical natural resources.

- The South Coastal Watershed Team is providing technical assistance to their towns by completing a stream-mapping project. During the winter and spring months the South Coastal watershed supplies water from snowmelt and rainwater to brooks and streams. During the summer and fall seasons the upper reaches of small waterways dry up and they are difficult to see. By mapping these tributaries, local Conservation Commissions can protect them from the impacts of development.

- The Ten Mile River Watershed Team is working with the Regional Planning Agency, municipal officials, and planning staff in six communities to develop a regional approach to open space protection. These plans identify critical land parcels to protect so limited resources and land use protection efforts can be directed to the most sensitive natural resources in the region. This approach will be applied in eight other watersheds beginning in the fall of 1999.

- The North Coastal Watershed Team in partnership with the Coastal Zone Management agency, the Regional Planning Agency and diverse groups from several North Coastal communities are working to develop alternatives to standard subdivision practices, including conservation subdivision, zoning, set asides, and conservation easements, among other options. This will allow for flexibility in town planning to protect or preserve historic, scenic, and natural areas.

The Initiative encourages <u>state, federal, and municipal governments</u> to work together to protect water resources. For example:

- The Initiative, working with the Wetlands Restoration and Banking Program, EPA, and the Gillette Corporation has

launched a statewide "Corporate Wetlands Restoration Partnership" which focuses corporate donations to restore priority wetlands across the state. Thus far, more than a dozen companies have pledged to donate money and staff to restoring wetlands.

- The Islands Watershed Team is working with four state and federal agencies, and the Town of Nantucket to study the water quality in Nantucket Harbor and its relationship to the declining scallop industry. They will evaluate habitat degradation, stormwater pollution, and spawning losses.

- The Blackstone Headwaters Coalition, using federal funds, is working to restore a stream that now exists only in an underground pipe. They are exploring strategies for stream and wetland restoration, and remediation of pollution problems, along a 3,500 foot collapsed culverted portion of Beaver Brook, in conjunction with the City of Worcester DPW, Mass Audubon Broadmeadow Brook, and U.S. Army Corps of Engineers.

The Initiative coordinates state and <u>non-profits</u> to complete comprehensive assessments so watershed restoration efforts are focused and successful.

- The Boston Harbor Watershed Team is coordinating with the MA Department of Environmental Protection, Environmental Protection Agency, Neponset River Watershed Association, United States Geological Survey, and the Town of Hingham to complete an analysis of the impacts of reduced streamflow on aquatic species in the Weir and Neponset River watersheds. This project will develop a practical rapid assessment methodology for determining minimum acceptable flow conditions based on watershed conditions such as fish and macroinvertebrate habitat requirements and the needs of the wetlands.

- The SuAsCo Watershed Team is working with DEP, the Army Corps of Engineers, EPA, and the Organization for the Assabet River to begin a TMDL (total maximum daily load) study to determine needed reductions in phosphorus levels. Phosphorus is causing seasonal degradation of the Assabet, Sudbury, and Concord rivers.

The Initiative is working with <u>private landowners</u> to help reduce pollution.

- The Connecticut, Parker, Ipswich, and Deerfield Rivers Watershed Teams are working with Conservation Districts and the Department of Food and Agriculture to implement livestock fencing projects to reduce agricultural pollution in these rivers. They are working to help farmers reduce animal waste in streams and prevent erosion of stream banks. Workshops for farmers will be held and tours will be led to demonstration farms.

- The Worcester County Conservation District is working with the Nashua and Chicopee Rivers Watershed Teams, the Metropolitan District Commission, EPA, and the City of Worcester to teach forest and farm landowners how to improve stewardship of their land. They are providing information on available technical and financial assistance that can help them prevent pollution of public water supplies.

Watershed Teams are working with <u>federal agencies</u> to leverage federal resources and funding to protect and restore watershed resources.

- The Charles River Watershed Team is coordinating with EPA, MDC, USGS, and MWRA to finance a study to determine the contribution of stormwater and combined sewer overflow pollution in the Charles River. This will help focus restoration dollars to where they will help most.

- The Millers River Watershed Team is coordinating with the Army Corp of Engineers, U.S Geological Survey, and DEP to identify the source of PCB contamination in the Tully River. This complex project requires close coordination between the agencies, the watershed council, and the local communities.

- In July 1998, President Clinton designated the Connecticut River as an American Heritage River. The Connecticut Watershed Council and the Regional Planning Agency collaborated with other team members and the four neighboring states to prepare the application for the federal government.

This designation will enable greater federal and state assistance to improve the Connecticut River.

- The Boston Harbor Watershed Team, Mass Wildlife, and the Army Corps of Engineers are working on a project to open fish passage at two dams on the lower Neponset River. The dams are a major barrier to anadromous fish and block access to twenty river miles of prime fish habitat. This project will study the problem at the watershed scale, make recommendations for a phased solution, and implement fish passage projects at both dams.

- Massachusetts received an additional $1.3 million in federal funds to solve pollution problems as a result of the Watershed Initiative. Team priorities will help guide the expenditures of these funds. The Federal Clean Water Action Plan program encourages states to adopt grassroots approaches to solving pollution, of which the Initiative is a national model.

- The Blackstone River Watershed Team is working with the Army Corps of Engineers on a Feasibility Study of the watershed. The goal of this study is to develop a list of river and wetland restoration opportunities and rank them by both cost and improvements in meeting Water Quality Standards. The study will involve surveying all the dams along the river, quantifying the amount of contaminated sediment behind the dams and assessing the impact of storm events on the sediment movement and calculate its part in causing water toxicity events during wet weather.

The Initiative encourages <u>community involvement</u> to help carry out action plans that focus and expand limited local, state, and federal resources. The Initiative reduces inefficiency by coordinating state agencies on a five year cycle of activities (see map).

- The Buzzards Bay team, in its outreach year, is supporting the expansion of the Westport River Watershed Association, the launching of a broad-based school education program, and the expansion of the Regional Community Congress to include broader environmental issues.

- The Boston Harbor Team, in the research year, is coordinating water quality, flow, and habitat studies with state, federal, and private expertise so that solutions can be focused on the highest priority sites.

- The French/Quinebaug Rivers Watershed Team, in its outreach year, is working with the Heritage Commission, University of Massachusetts, Nichols College, and the local Regional Planning Agency to involve communities in solving local problems so that protection and restoration efforts will gain broad-based support.

- Housatonic River Restoration, Inc. is developing a restoration plan for the river, following the government's negotiated settlement with General Electric Company. HRR, Inc. is a broad-based coalition of environmental, conservation, and political entities from throughout the watershed, representing a united public voice. The goal of HRR, Inc. and the Watershed Team is a fishable, swimmable river through its participation in effective application of Natural Resource Damages of the GE settlement funds.

- Forums to involve the general public have been held in the Westfield, SuAsCo, French/Quinebaug, Connecticut, Nashua, Taunton, and Merrimack river watersheds. These events have involved hundreds of participants and allowed time for people to give their ideas on how to better protect and restore valuable watershed resources.

Section II: Priorities for the 27 Watersheds

By working with grassroots teams of people "with their feet in the water", we can focus limited resources on the most critical issues in each watershed. The following is a list of two top priorities identified by the watershed teams in each watershed.

Watersheds	***Top Priorities***
Blackstone	Improving water quality & protecting open space
Boston Harbor	Monitoring water quality & restoring adequate stream flows
Buzzards Bay	Reducing nitrogen impacts to water & improving growth management
Cape Cod	Protecting drinking water supplies & reducing point & non-point source pollution
Charles	Reducing bacteria loading (stormwater & combined sewer overflows) & resolving water quantity problems
Chicopee	Municipal assistance & reducing combined sewer overflows
Connecticut	Reducing combined sewer overflows & riparian buffer protection
Deerfield	Protecting and improving aquatic habitat & recreational use
Farmington	Reducing non-point source pollution & protecting lakes/ponds
French/Quinebaug	Increasing outreach/education & recreation/tourism
Housatonic	Cleanup and restoration of Housatonic River & protecting lakes/ponds
Hudson	Reducing high water temperature impacts & non-point source pollution
Ipswich	Assessing impacts of low streamflow & aquatic habitat degradation
Islands	Restoring shellfish beds & reducing non-point source pollution
Merrimack	Reducing combined sewer overflows & stormwater pollution
Millers	Assessing impacts of PCB's in the river & protecting open space
Nashua	Reducing non-point source pollution & protecting open space
North Coastal	Updating point source pollution permits & reducing storm water pollution
Parker	Managing water resources needs including water supply, fisheries and recreation & building public awareness
Shawsheen	Improving water flow (flooding and low flow problems) & resolving stormwater pollution
South Coastal	Improving growth management & balancing water supply and habitat needs
SuAsCo	Resolving water quantity / quality (high nutrient levels) issues & protecting priority habitats
Taunton	Resolving water supply issues & prioritizing environmental needs
Ten Mile/Narragansett	Reducing coliform contamination & protecting open space
Westfield	Reducing non-point source pollution & finding the source of impaired waters

Section III: What the Initiative can do with your help in the future

- Reduce the number of degraded waters in the state (currently over 1,200 river/stream segments and lakes/ponds).
- Increase fisheries habitat through improved passage at key dams (currently few of the state's 3000 dams permit fish passage).
- Implement effective strategies for preventing and reversing the effects of low flows upon aquatic habitat.
- Increase low-impact public access to the waters of the Commonwealth, especially to rivers in urban areas.
- Help communities to guide future growth to less sensitive watershed areas and reduce the impact of non-point source pollution from existing development.
- Support the work of local boards in protecting water resources and ecosystems.
- Expand the number of self-sustaining watershed associations, stream teams, and community councils so these organizations can help improve community stewardship.
- Build participation on Watershed Teams to improve delivery of programs and resources of each EOEA agency.
- Broaden the understanding of watershed protection and how the watershed approach is implemented.
- Increase assistance from federal programs to help address community problems and concerns.

How can you help?

At Home:

- Join a Stream Team or Watershed Association in your area to advocate for the protection, preservation, and restoration of watershed resources.
- Landscape your yard with trees and plants that require a minimum of water and fertilizer.
- Perform routine maintenance on your septic system.
- Use public transportation or carpool whenever possible.
- Compost grass clippings and leaves or use them as mulch in gardens.
- Recycle or properly dispose of used oil, paint, and household chemicals; try using nontoxic alternatives (baking soda, etc.) to household cleaning chemicals.
- Collect rainwater and use it to water lawns and gardens.
- Be active on town boards and committees such as Planning, Zoning, Conservation, Open Space, and Master Planning.
- Be a steward of your natural community and preserve your community's character.

On the job & on the farm:

- Use soil erosion controls such as silt fences or rock berms whenever soil is disturbed (as in construction) and revegetate the area as soon as possible.
- Recycle animal wastes and crop residues as fertilizer or compost. Test soil before applying fertilizer to prevent over-fertilization.
- Dispose of wastes properly, never on the ground or in streams.
- Maintain natural vegetation zones along creeks, keep livestock out of streams, and reduce erosion by creating terraces on slopes or by contour plowing.
- Reduce, recycle, and reuse.